
**Preliminary Site Investigations:
New Jersey Turnpike
1985 - 90 Widening
from Passaic River to Milepost 105**

**Historical Survey of Possible Sources of Contamination
within and adjacent to the Proposed Turnpike Right-Of-Way**

Submitted to:

New Jersey Turnpike Authority

New Brunswick, New Jersey.

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I. INTRODUCTION

A. Purpose

The purpose of this historical survey is to identify and locate the possible sources of pollution which may have contaminated properties within and adjacent to the proposed Right-of-Way for the New Jersey Turnpike Widening Project. The specific spatial limits of this survey extend from the Passaic River on the north to a point just north of Milepost 105 on the south. Subsequent historical surveys of individual properties outside of this area will be completed in the near future. However these properties, because of their relative separation from one another do not lend themselves to the regional type of evaluation used in this report.

This exercise is historical in nature, in that data from the years 1934 through 1985 were analyzed and presented as indications of historical contamination. Within the context of this study, sources of contamination have been identified via remote sensing techniques (that is, not field-checked) and therefore can be considered qualitative in nature. In addition, since the position of a possible source of contamination is derived from the analysis of aerial photographs, its precise location is limited by the scale distortions inherent in aerial photography.

This work was performed since a particular property cannot be evaluated for contamination based only on factors which exist at the present time. Rather it must be appraised in light of previous activities on the site, since those activities may have had a profound effect on present levels of contamination. This is especially true of the geographic areas within this report which have undergone extensive changes over the last fifty years. The present status of properties of concern has been described previously by Louis Berger and Associates. This report concentrates more on identifying, locating and chronicling the possible origins of contamination.

B. Organization

Section II depicts the methodology used in the analysis of sources of contamination. Section II-A relates the stereoscopic photointerpretation procedure along with the remote sensing characteristics of each possible cause of contamination. Section II-B describes the tabular and graphical forms of data presentation. Section III provides an overall historical summary of land use within and adjacent to the proposed Turnpike widening area.

Section IV describes the possible sources of contamination on each property in detail and is subdivided on a geographic basis into: IV-A. North Map - West Side of Turnpike, IV-B. North Map - East Side of Turnpike, IV-C. South Map - West Side of Turnpike and IV-D. South Map - East Side of Turnpike.

C. Use of the Data

The information in this historical survey has been used to delineate the presence, type, location and duration of possible sources of contamination on the properties involved in the widening of the New Jersey Turnpike from the Passaic River to Milepost 105. With this in mind, the locations of certain subsequent field detection measurements (e.g., Soil Borings and Groundwater Monitoring Wells) have been concentrated in areas where possible sources of contamination are concentrated.

It should be emphasized that because of the nature of data acquisition (remote sensing and literature search), neither the existence nor absence of contamination on a property can be proved conclusively. Confirming evidence must be obtained where possible through subsequent field investigations. In addition, no allegations of legal violations are intended.

II. METHODOLOGY

A. Aerial Photography

Aerial photographs covering the Turnpike area from the Passaic River to Milepost 105 were obtained from various sources for the years 1934, 1940, 1947, 1951, 1959, 1970 and 1985. This frequency of exposure provided sufficient coverage to chronicle the recent industrial and environmental history of the area. The scales of the photographs in this initial phase of investigation ranged from 1"=1000' to 1"=2000'.

Stereoscopic photointerpretation with a mirror stereoscope was done for each set of photographs to delineate cultural and environmental features. The stereoscope enables one to see a "stereo pair" of photographs in three dimensions, thus facilitating identification procedures. Features can be recognized as having positive relief (above ground level), negative relief (below ground level) or zero relief (at ground level). The following are some of the characteristics of the possible sources of contamination identified by stereoscopic photointerpretation in the Turnpike area and in heavily industrialized and urbanized areas in general:

- * Industrial Activity - buildings and other industrial structures were identified and exhibited positive relief. Ground outlines of former building sites (zero relief) and excavations (negative relief) were distinguished. Other signs of industrial activity are parking lots, smokestacks, incinerators, site roads, trucks and other vehicles.
- * Drum Storage - Drums and barrels were identified based on positive relief, shape and grouping. Ground stains are usually present when drum storage is identified.
- * Tank Storage - Usually associated with a larger industrial operation (refinery, utility, chemical company). Positive relief.
- * Liquid Storage - Usually associated with a larger industrial operation (refinery, etc.). Much greater potential source of contamination than tank storage. Distinguished by the presence of liquid (flat, usually black), negative relief and by surrounding dikes (positive relief).
- * Standing Liquid - Usually associated with industrial or landfill operations, however it is more likely to be an unplanned accumulation. Where it does appear to be planned, it is usually confined to a ditch and a surrounding dike is not usually present. Distinguished by presence of a liquid and negative relief.

- * Lagoon - Characterized by the same features as that for liquid storage, except that the purpose is for liquid disposal or runoff rather than for industrial use.
- * Sludge - Usually associated with larger industrial operations. Characterized by lighter color than a liquid, negative relief, presence of surrounding dikes (positive relief).
- * Fill - Usually associated with grading operations. Distinguished from undisturbed ground by its lighter color at inception (lack of vegetation) and by having positive relief. Distinguished from landfill operations by its uniformity of color (generally light), smooth texture, flat surface and lack of obvious waste.
- * Landfill - Usually a sanitary landfill where municipal solid wastes and construction debris are permanently deposited. Characteristic features are positive relief, variable light and dark coloration, irregular texture, presence of waste piles, road networks, trucks, incinerators, leachate (lighter color) at extremities of landfill. There may also be liquid storage, Lagoons and drum storage.
- * Waste Disposal - Usually associated with an industrial facility. Recognized by variable light and dark coloration, irregular texture and positive relief. It may be permanent disposal or temporary storage of waste material.

When the identification of possible sources of contamination on the 9" x 9" stereo pairs was completed, each photo was enlarged to a scale of 1"=200' to facilitate positive identification of minute features and to allow the smallest possible margin of error in the digitizing process. The cultural, industrial and environmental features on each enlarged photograph were then digitized with an IBM PC-AT equipped with a CAD software package and the data was stored. This process permitted the readjustment of the scales of the aerial photos and the capability to display the data in a variety of useful formats.

B. Forms of Data Presentation

A summary of the aerial photographic analysis is presented in Tables 1, 2, 3 and 4. Tables 1 and 2 contain information derived from the north half of the study area (that is, from the Passaic River on the north to the Central Railroad Line on the south; see Figure 1) and Tables 3 and 4 contain information on the south half of the study area (that is, from the Central Railroad Line on the north to the Oak Island Rail Yards on the south; see Figure 2). The set of maps in the Appendix show the possible sources of contamination for each year analyzed. Each year was assigned a different color and each feature was labelled as to the type of contamination. For an exact location of a potential source of contamination on a property, one may refer to these maps.

Figures 1 and 2 show the Proposed Turnpike Right-of-Way (in black), the Properties within or touched by the Right-of-Way (in black and indexed by numbers 1/10" in height) and the Roads and Railroads (black). The site numbers of the properties on the map correspond to the site numbers in Tables 1, 2, 3 and 4.

Figures 3 and 4 show the Proposed Right-of-Way (black), the Properties within or touched by the ROW (black), the Roads and Railroads (black) and the maximum areal extent of the present day as well as historic landfills (aqua). Four previously undocumented landfills included in the Proposed Right-of-Way were identified (Landfills A, B, C and G) and two previously known landfills in the ROW (Avenue P Landfill (I&J) and the Delancey Street Landfill (H)) were found to be much greater in areal extent than was originally thought. The existence of the undocumented landfills will be confirmed through cross references to geotechnical boring logs and site investigations.

Figures 5 and 6 show the Proposed ROW (black), Properties, Roads and Railroads (black) and the Historic Industrial Facilities (various colors). The facilities are shown by an open polygon and coded by color, that is, the year in which a particular industrial facility was added is referenced to a color in the Explanation. Also the year a particular facility was removed is shown by a cross-hatching in the open polygon with a color corresponding to that year.

Supplemental historical identification of the Industrial Facilities in the study area was made possible through the use of Graphic Map Volumes for Newark by the Sanborn Map Company and is shown in Tables 1, 2, 3 and 4. Other historical sources are currently being investigated to cross check the industrial facility identification from Sanborn.

III. SUMMARY REPORT OF LAND USE

In 1934, the Turnpike area between the Passaic River and the Oak Island Rail Yards was characterized by heavy industrialization and urbanization. An infrastructure of highways, city streets and railroads was in place. The industrial elements which dominated the landscape of that time were the Public Service Electric and Gas coal burning power plant adjacent to the Passaic River, the Conoco Refinery on Doremus Avenue, Metz Laboratories on Foundry Street, along with numerous small industrial facilities (Hart Dying Company, Capstone Manufacturing Company, Lacquer Specialties, Bayonne Barrel and Drum and the Mertz Rendering Plant). Other indications of an increasingly expansive urbanization are the Sewage Treatment Plant and the already growing landfill activity. Landfills F (Milepost 106 Landfill) and H (nucleus of Delancey Street Landfill) on Wilson Street and Landfill A on Foundry Street were well established at this time.

The Jersey Feed Farms on Foundry Street and the cultivated areas south of Wilson Avenue are remnants of this area's agricultural past that were present in 1934. In addition, two tracts of undeveloped marshland west of Doremus Avenue were also preserved in 1934.

By 1940, the facilities at the Public Service Electric and Gas Plant had expanded and agricultural activities had been drastically curtailed. Also the Landfills H (nucleus of Delancey Street Landfill) and A (off Foundry Street) expanded dramatically. Other industrial activity declined as several industrial facilities present in 1934 were demolished by 1940.

By 1947, the Landfills A and H (nucleus of Delancey Street Landfill) had reached their maximum areal extent and Landfills K (south of Wilson Avenue), I&J (nucleus of the Avenue P Landfill, west of Doremus Avenue) and F (nucleus of the Milepost 106 Landfill) were expanding rapidly. Industrial development was fairly stagnant with the exception of expansions of the Lacquer Specialties Plant on Avenue P and Foundry Street and the Beckwith Chandler Plant on Rutherford Street.

Turnpike development was evident by 1951 and the only major changes were a reclamation of parts of Landfills A and H (nucleus of Delancey Street Landfill) and continued expansion of Landfills I&J (nucleus of Avenue P Landfill), K and F (nucleus of Milepost 106 Landfill).

The Turnpike was in full operation by 1959. A Drive-In Movie had been built atop part of Landfill A and Landfills K, I&J (nucleus of Avenue P Landfill) and F (nucleus of Milepost 106 Landfill) showed renewed expansion. Changes in industrial activity consisted of the establishment of auto salvage yards along the Turnpike near Wilson Avenue and the reduction of operations at the Conoco Refinery.

The Turnpike had been widened by 1970 and the expansion of the auto salvage yards throughout the area was the only notable commercial change. Landfills I&J (Avenue P Landfill) were merged and Landfill F (Milepost 106 Landfill), and K had reached their maximum areal extent.

Changes by 1985 included the closing of the Drive-In Movie and the Conoco Refinery and the expansion of the waste water treatment plant atop former Landfill K.

As can be ascertained from the above text, Tables 1-4, Figures 1-6 and the maps in the Appendix, the vast majority of the properties within the Proposed Turnpike Right-of-Way from the Passaic River to Milepost 105 have been exposed to possible sources of contamination at some time from 1934 to 1985 either from activities directly on the properties or immediately adjacent to them. The primary sources of contamination during that period have been from landfill activity and industrial operations.

IV. PROPERTY REPORTS

The property reports are presented in the following manner. The property or site is indexed by a number. This number is the same as that shown in Tables 1,2,3 and 4. Ownership/Occupant data can therefore be found by referring to those tables. The second item of information for each property identifies the type of possible contamination on a property along with the year or years that it was observed. The third item of information is the similar to the second except that only those possible sources of contamination that are wholly or partially within the proposed Right-of-Way on the property are indicated. Industrial Activity where identified indicates a possible source of contamination except where it is described as (low risk).

A. North Map - West Side of Turnpike

* SITE 11

Property: Fill-(1947,1985). Waste Disposal-(1970).

ROW: Fill-(1947,1985). Waste Disposal-(1970).

* SITE 20

Property: Fill-(1947,1985). Waste Disposal-(1970).

ROW: Fill-(1947,1985). Waste Disposal-(1970).

* SITES 21-22

Property: Fill-(1947,1985). Waste Disposal-(1970).

ROW: Fill-(1947,1985). Waste Disposal-(1970).

* SITE 24

Property: Waste Disposal-(1940,1951,1970). Fill-(1947,1985).

Landfill-(1985).

ROW: Waste Disposal-(1951,1970). Fill-(1985).

* SITE 25

Property: Industrial Activity-(1934: Hart Dyeing Company, 1985:

Deleet Merchandising Company(low risk)). Waste Disposal-

(1940,1951). Fill-(1959). Landfill-(1970,1985).

* SITES 30-33

Property: Industrial Activity-

(1934,1940,1947,1951,1959,1970,1985: Bayonne Barrel & Drum).

Drum Storage-(1934,1940,1947,1951,1959,1970,1985). Landfill-

(1934,1940,1947). Lagoon-(1947,1951). Fill-(1959). Tank Storage-

(1985). Waste Disposal-(1959,1985).

ROW: Industrial Activity-(1934,1940,1947,1951,1959,1970,1985:

Bayonne Barrel & Drum). Drum Storage-

(1934,1940,1947,1951,1959,1970,1985). Landfill-(1934,1940,1947).

Lagoon-(1947,1951). Fill-(1959). Tank Storage-(1985). Waste

Disposal-(1959).

* SITES 34-35

Property: Industrial Activity-(1934: Jersey Feed Farms).
Landfill-(1934,1940,1947). Lagoon-(1951). Waste Disposal-(1985).
ROW: Industrial Activity-(1934: Jersey Feed Farms). Landfill-
(1934,1940,1947). Lagoon-(1951). Waste Disposal-(1985).

* SITES 42-44

Property: Industrial Activity-(1934-1950: Capstone Manufacturing
Company, Metz Laboratories, 1950-1970: Ohmlac Paint Company,
1950-?: Chemical Industries/Arkansas Chemical). Tank Storage-
(1934,1940,1947,1951,1959,1970,1985). Fill-(1940).
ROW: Industrial Activity-(1934-1950: Capstone Manufacturing
Company, Metz Laboratories, 1950-1970: Ohmlac Paint Company,
1950-?: Chemical Industries/Arkansas Chemical). Tank Storage-
(1934,1940,1947,1951,1959,1970,1985). Fill-(1940).

B. North Map - East Side of Turnpike

* SITE 10

Property: Fill-(1947).
ROW: Fill-(1947).

* SITE 1

Property: Industrial Activity-
(1934,1940,1947,1951,1959,1970,1985: PSE&G). Coal Storage-
(1934,1940,1947,1951,1959). Tank Storage-
(1940,1947,1951,1959,1970,1985). Waste Disposal-(1940,1959).
Lagoon-(1947,1951,1959,1970). Fill-(1970).
ROW: Industrial Activity-(1934,1940,1947,1951,1959,1970,1985:
PSE&G).

* SITE 49

Property: Industrial Activity-(1934,1940,1947,1951; 1985: B&S
Partners/SCA Chem Services(low risk). Drum Storage-(1940).
Landfill-(1947).
ROW: Industrial Activity-(1934,1940,1947,1951). Landfill-(1947).

* SITE 50

Property: Industrial Activity-(1985: Vineland Construction(low
risk)). Landfill-(1934,1940,1947). Waste Disposal-(1970).
ROW: Landfill-(1934,1940,1947). Waste Disposal-(1970).

* SITE 51

Property: Industrial Activity-
(1934,1940,1947,1951,1959,1970,1985: Getty Oil). Waste Disposal-
(1934,1959,1970). Tank Storage-(1940,1947,1951,1959,1970,1985).
Open Storage-(1959). Standing Liquid-(1959). Landfill-(1970).
ROW: Industrial Activity-(1934,1940,1947,1951,1959,1970,1985:
Getty Oil). Waste Disposal-(1934). Tank Storage-
(1940,1947,1951,1959,1970,1985). Landfill-(1970).

* SITE 54

Property: Industrial Activity-(1985: Jan Realty Urban Renewal Association/Rollins Truck Leasing(low risk)). Lagoon-(1947,1951,1959). Landfill-(1951,1959,1970). Standing Liquid-(1959).

ROW: Industrial Activity-(1985: Jan Realty Urban Renewal Association/Rollins Truck Leasing(low risk)). Lagoon-(1947,1951,1959). Landfill-(1951,1959,1970). Standing Liquid-(1959).

* SITE 55

Property: Industrial Activity-(1934,1940,1947,1951,1959,1970: Pitt-Consol Chemical). Tank Storage-(1934,1940,1947,1951,1959,1970,1985). Waste Disposal-(1934). Liquid Storage-(1934). Lagoon-(1940,1947,1951,1959). Standing Liquid-(1947,1951,1959,1985). Drum Storage-(1947). Fill-(1959).
ROW: Waste Disposal-(1934). Lagoon-(1940,1947,1951,1959). Standing Liquid-(1959).

* SITE 56

Property: Industrial Activity-(1959,1970,1985: Jumon Realty Company/Friedman's Express(low risk)). Landfill-(1940,1947).
ROW: Landfill-(1940,1947).

* SITE 57

Property: Industrial Activity-(1934-1950: Lacquer Specialties; 1950-1985?: Chemical Solvents & Lacquer Specialties/Ashland Oil & Refining). Tank Storage-(1934,1940,1947,1951,1959,1970,1985).
ROW: Industrial Activity-(1934-1950: Lacquer Specialties; 1950-1985?: Chemical Solvents & Lacquer Specialties/Ashland Oil & Refining).

C. South Map - West Side of Turnpike

* SITE 89

Property: Industrial Activity-(1959,1970,1985: Junkyard). Landfill-(1934,1940,1947,1951,1959,1970). Waste Disposal-(1934). Fill-(1951). Liquid Storage-(1985).
ROW: Waste Disposal-(1934). Landfill-(1951,1959,1970). Fill-(1951).

* SITE 90

Property: Industrial Activity-(1934-1950: Rockwell Machinist; 1951,1959,1970,1985: Junkyard). Waste Disposal-(1947,1985). Open Storage-(1959,1985). Drum Storage-(1985).
ROW: Industrial Activity-(1934-1950: Rockwell Machinist; 1951,1959,1970,1985: Junkyard). Waste Disposal-(1947,1985). Open Storage-(1959,1985). Drum Storage-(1985).

* SITE 94

Property: Industrial Activity-(1947; 1951,1959,1970,1985: M&M Transport Motor Freight/Courtesy Container Service(low risk)). Drum Storage-(1947).

ROW: Industrial Activity-(1947; 1951,1959,1970,1985: M&M Transport Motor Freight/Courtesy Container Service(low risk)). Drum Storage-(1947).

* SITE 95

Property: Industrial Activity-(1959,1970,1985: Roy Stone Transfer Corp./Junkyard). Landfill-(1934,1940,1947,1951,1959). Standing Liquid-(1951).

ROW: Industrial Activity-(1959,1970,1985: Roy Stone Transfer Corp./Junkyard). Landfill-(1934,1940,1947,1951,1959). Standing Liquid-(1951).

* SITE 96

Property: Industrial Activity-(1970,1985: Imperial Urban Renewal/Ironbound Transport Park/Junkyard). Landfill-(1934,1940,1947,1951,1959). Waste Disposal-(1970).

ROW: Industrial Activity-(1970,1985: Imperial Urban Renewal/Ironbound Transport Park/Junkyard). Landfill-(1934,1940,1947,1951,1959).

* SITE 97

Property: Industrial Activity-(1970,1985: Imperial Urban Renewal/Ironbound Transport Park/Junkyard). Landfill-(1934,1940,1947,1951,1959).

ROW: Industrial Activity-(1970,1985: Imperial Urban Renewal/Ironbound Transport Park/Junkyard). Landfill-(1934,1940,1947,1951,1959).

* SITE 103

Property: Landfill-(1940,1947,1951,1959,1970,1985).

ROW: Landfill-(1940,1947,1951,1959,1970,1985).

D. South Map - East Side of Turnpike

* SITE 72

Property: Waste Disposal-(1970,1985).

* SITES 73 & 77

Property: Industrial Activity-(1934: Mertz Rendering Plant; 1940,1947,1951,1959,1970; 1985: Pfister Chemical/Alliance Color & Chemical). Lagoon-(1951,1970). Landfill-(1959). Tank Storage-(1985). Drum Storage-(1985).

ROW: Industrial Activity-(1934: Mertz Rendering Plant; 1940,1947,1951,1959). Lagoon-(1951,1970). Landfill-(1959).

- * SITES 78-79.
Property: Industrial Activity-(1934,1940,1947,1951,1959,1970,1985). Landfill-(1934,1940,1947,1951,1959,1970,1985). Sludge-(1940). Lagoon-(1947,1970).
ROW: Landfill-(1940,1947,1951,1959,1970,1985). Lagoon-(1947,1970).
- * SITE 80
Property: Industrial Activity-(1934,1940; 1970: Junkyards; 1985: White Rose Meats(low risk)). Waste Disposal-(1934,1947,1951). Landfill-(1959,1970). Lagoon-(1985).
ROW: Industrial Activity-(1970: Junkyards). Waste Disposal-(1947,1951). Landfill-(1959,1970). Lagoon-(1985).
- * SITE 81
Property: Landfill-(1959,1970). Waste Disposal-(1970). Tank Storage-(1985).
ROW: Landfill-(1959,1970). Waste Disposal-(1970). Tank Storage-(1985).
- * SITES 82 & 83-85
Property: Industrial Activity-(1934,1940,1947,1951; 1970,1985: Junkyards). Waste Disposal-(1940,1947,1951,1970,1985). Landfill-(1947,1959,1970). Drum Storage-(1947). Open Storage-(1947). Fill-(1947).
ROW: Industrial Activity-(1934,1940,1947,1951; 1970,1985: Junkyards). Waste Disposal-(1940,1947,1951,1970,1985). Landfill-(1947,1959,1970). Drum Storage-(1947). Fill-(1947).
- * SITE 86
Property: Industrial Activity-(1934,1940,1947,1951,1959; 1970,1985: Junkyards). Open Storage-(1959).
ROW: Industrial Activity-(1934,1940,1947,1951,1959; 1970,1985: Junkyards). Open Storage-(1959).
- * SITE 113
Property: Industrial Activity-(1959,1970: Junkyards; 1985).
ROW: Industrial Activity-(1959,1970: Junkyards; 1985).
- * SITE 112
Property: Industrial Activity-(1959:Junkyards; 1985: Jet Urban Renewal Corp./Circle Air Freight (low risk)).
ROW: Industrial Activity-(1959:Junkyards; 1985: Jet Urban Renewal Corp./Circle Air Freight (low risk)).
- * SITES 111 & 109
Property: Industrial Activity-(1934-1950: Beckwith Chandler Paints; 1950-?: Devoe & Reynolds; 1951,1959,1970; 1985: ADCO Chemical). Tank Storage-(1959,1985). Waste Disposal-(1985).

- * SITE 104
Property: Industrial Activity-(1959,1970,1985: Monoplast Chemical Company).
ROW: Industrial Activity-(1959,1970,1985: Monoplast Chemical Company).
- * SITE 105
Property: Landfill-(1970,1985). Drum Storage-(1985).
ROW: Landfill-(1985).
- * SITE 106
Property: Landfill-(1934,1940,1947,1970,1985).
ROW: Landfill-(1934,1940,1947).
- * SITE 107
Property: Landfill-(1947).
ROW: Landfill-(1947).

TABLE 1

HISTORICAL SURVEY - POSSIBLE SOURCES OF CONTAMINATION (NORTH MAP/WESTSIDE OF TURNPIKE)

Site #	Present Owner/Occupant	1934	1940	1947	1951	1959	1970	1985	Previous Owner/Occupant
11	Newark Housing Authority	-	-	FL	-	-	WD	FL	
20	Conrail	-	-	FL	-	-	WD	FL	
21-22	Conrail	-	-	FL	-	-	WD	FL	
24	City of Newark	-	WD	FL	WD	-	WD	LF, FL	
5A26	Conrail	-	-	-	-	-	-	-	
6	PSE&G	-	-	-	-	-	-	-	
7	Dept. of Higher Education	-	-	-	-	-	-	-	
25	Delect Merchandising Corp.	IA	WD	-	WD	FL	LF	LF, IA	Hart Dyeing Co. 1934-40
30-33	Bayonne Barrel & Drum Frank Langelle	IA, DR, LF	IA, DR, LF	IA, DR, LG LF	IA, DR, LG	IA, DR, FL WD	IA, DR	TS, IA, DR, WD	
34-35	Edle Realty	LF, IA	LF	LF	LG	-	-	WD	Jersey Feed Farms (pig- pens) 1934-40/Drive-In 1959
42-44	41-Foundry St. Corp./ Sun Chemical 42-City of Newark/Ark. Chem 43-Ashland Oil 44-Ashland Oil	IA, TS	IA, FL, TS	IA, TS	IA, TS	IA, TS	IA, TS	IA, TS	Capstone Mfg. Co. (oil, Grease, Soaps) 1934-50 Ohmic Paint & Ref. Co. 1950-70 Metz Laboratories (Mfg. Drugs) 1934-50 Chem Industries/Arkansas Chem. 1950-

LEGEND

C - Coal Storage	LS - Liquid Storage
DR - Drum Storage	OS - Open Storage
FL - FILL	SD - Sludge
IA - Industrial Activity	SL - Standing Liquid
LF - Landfill	TS - Tank Storage
LG - Lagoon	WD - Waste Disposal

TABLE 2

HISTORICAL SURVEY - POSSIBLE SOURCES OF CONTAMINATION (NORTH MAP/EASTSIDE OF TURNPIKE)

Site #	Present Owner/Occupant	1934	1940	1947	1951	1959	1970	1985	Previous Owner/Occupant
9	NJ Turnpike Authority	-	-	-	-	-	-	-	
10	NJ Turnpike Authority	-	-	FL	-	-	-	-	
8	Conrail	-	-	-	-	-	-	-	
1	PSE&G	IA,C	IA,TS,WD, C	IA,TS,LG, C	IA,TS,LG, C	IA,TS,LG, C,WD	IA,TS,LG, FL	IA,TS	
3	PSE&G	-	-	-	-	-	-	-	
49	B&S Partners/SEA Chem SVCES (Trailer Parts)	IA	IA,DR	IA,LF	IA	-	-	IA	
50	Vineyard Construction	LF	LF	LF	-	-	WD	IA	
51	Power Test Realty/Getty	IA,WD	IA,TS	IA,TS	IA,TS	IA,TS,WD, OS,SL	IA,TS,LF, WD	IA,TS	Getty Oil
54	Jan Realty Urban Renewal Assn/Rollins Truck Leas.	-	-	LG	LF,LG	LF,SL,LG	LF	IA	
55	Pitt-Consol Chemical	IA,TS,WD, LS	IA,TS,LG	IA,TS, LG,SL,DR	IA,TS, LG,SL	IA,TS,LG, SL,FL	IA,TS,	SL,TS	
56	Jumon Realty Co./ Friedman's Express	-	LF	LF	-	IA	IA	IA	
57	Ashland Oil & Refining	IA,TS	IA,TS	IA,TS	IA,TS	IA,TS	IA,TS	IA,TS	Lacquer Specialties (Lacquer Mfg. 1934-50) Chemical Solvents & Lacquer Spec. 1950

LEGEND

C - Coal Storage
 DR - Drum Storage
 FL - Fill
 IA - Industrial Activity
 LF - Landfill
 LG - Lagoon

LS - Liquid Storage
 SD - Sludge
 OS - Open Storage
 SL - Standing Liquid
 TS - Tank Storage
 WD - Waste Disposal

TABLE 3

HISTORICAL SURVEY - POSSIBLE SOURCES OF CONTAMINATION (SOUTH MAP/WESTSIDE OF TURNPIKE)

Site #	Present Owner/Occupant	1934	1940	1947	1951	1959	1970	1985	Previous Owner/Occupant
87	Conrail	-	-	-	-	-	-	-	
88	Conrail	-	-	-	-	-	-	-	
89	Newark Housing Authority	LF,WD	LF	LF	LF,FL	IA,LF	IA,LF	IA,LS	
90	Newark Housing Authority/ Junkyard	IA	IA	IA,WD	IA	IA,OS	IA	IA,OR,OS,WD	W.S. Rockwell (Machinist) 1934-50
94	Courtesy Container Service	-	-	IA,OR	IA	IA	IA	IA	M&M Transport (Motor Freight) 1951
95	Roy Stone Transfer Corp.	LF	LF	LF	LF,SL	LF,IA	IA	IA	Junkyard
96	Imperial Urban Renewal Assn/IronBound Transport Park	LF	LF	LF	LF	LF	IA,WD	IA	
97	Imperial Urban Renewal Assn/IronBound Transport Park	LF	LF	LF	LF	LF	IA	IA	
103	Newark Housing Authority	-	LF	LF	LF	LF	LF	LF	

LEGEND

C - Coal Storage	LS - Liquid Storage
OR - Drum Storage	SD - Sludge
FL - Fill	OS - Open Storage
IA - Industrial Activity	SL - Standing Liquid
LF - Landfill	TS - Tank Storage
LG - Lagoon	WD - Waste Disposal

TABLE 4

HISTORICAL SURVEY - POSSIBLE SOURCES OF CONTAMINATION (SOUTH MAP/EASTSIDE OF TURNPIKE)

Site #	Present Owner/Occupant	1934	1940	1947	1951	1959	1970	1985	Previous Owner/Occupant
72	Conrail	-	-	-	-	-	WD	WD	Mertz Rendering Plant 1934
73	Pfister Chemical/Alliance	IA	IA	IA	IA, LG	IA, LF	IA, LG	IA, TS, DR	
77	Alliance Color & Chemical								
78-79	Newark Housing Authority	IA, LF	IA, LF, SD	IA, LF, LG	IA, LF	IA, LF	IA, LF, LG	IA, LE	
80	Newark-Economic Development White Rose Meats	IA, WD	IA	WD	WD	LF	IA, LF	IA, LG	Junkyards
81	Synfax Urban Renewal Corp.	-	-	-	-	LF	LF, WD	TS	
82	Newark Housing Author./ Junkyard	IA	IA, WD	IA, LF, DR, OS, FL, WD	IA, WD	LF	IA, WD, LF	IA, WD	
83-85	Federal Storage Warehouse/ Junkyards								
86	Stephanie Klena/Diner	IA	IA	IA	IA	IA, OS	IA	IA	Beckwith Chandler (Mfg. Paints) 1934-50 Devos & Reynolds 1950-
113	Passaic Valley Sewerage Comm.	-	-	-	-	IA	IA	IA	
112	Jet Urban Renewal Corp./ Circle Air Freight	-	-	-	-	IA	-	IA	
111	Ridge Equities/ADCO Chem.	IA	IA	IA	IA	IA, TS	IA	IA, TS, WD	
109									
104	Newark Housing Authority/ Monoplast Chemical Corp.	-	-	-	-	IA	IA	IA	
105	Passaic Valley Sewerage Comm.	-	-	-	-	-	LF	LF, DR	
106	City of Newark	LF	LF	LF	-	-	LF	LF	
107	Passaic Valley Sewerage Comm.	-	-	LF	-	-	-	-	

LEGEND

C - Coal Storage
 DR - Drum Storage
 FL - Filler
 IA - Industrial Activity
 LF - Landfill
 LG - Lagoon

LS - Liquid Storage
 OS - Open Storage
 SD - Sludge
 SL - Standing Liquid
 TS - Tank Storage
 WD - Waste Disposal

EXPLANATION

DR	Drum Storage	SD	Sludge
FL	Fill	SL	Standing Liquid
LF	Landfill	TS	Tank Storage
LG	Lagoon	WD	Waste Disposal
LS	Liquid Storage	WP	Waste Pile
OS	Open Storage		

1934 INFORMATION

1940 INFORMATION

1947 INFORMATION

1951 INFORMATION

1959 INFORMATION

1970 INFORMATION

1985 INFORMATION

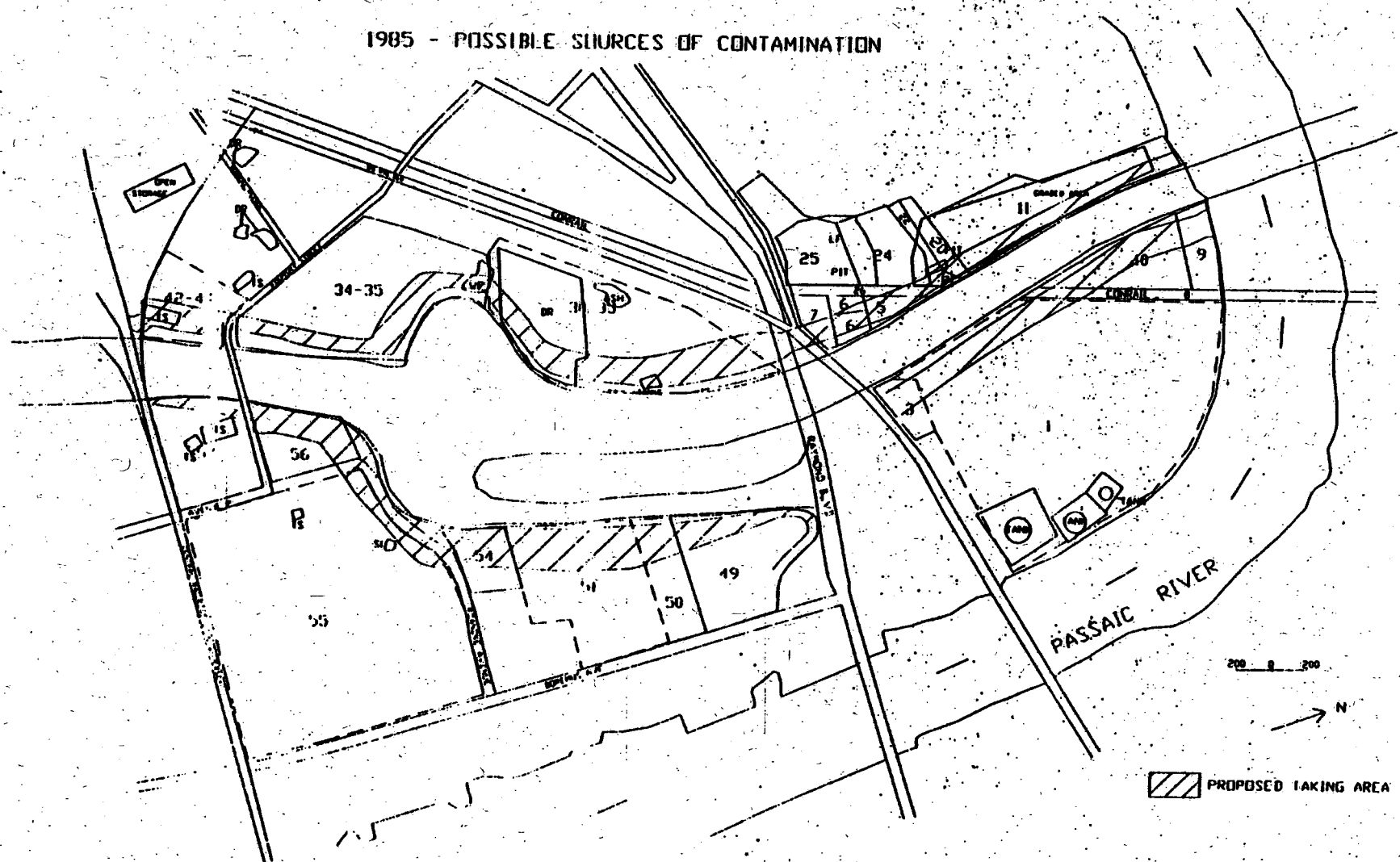


Proposed Turnpike ROW



Demolished Buildings

1985 - POSSIBLE SOURCES OF CONTAMINATION



December 23, 1985

Gollob Analytical Service
47 Industrial Road
Berkeley Heights, New Jersey 07922

Attention: Lou Molinini

Re: Transfer of Soil Samples and Request for Analysis
Bayonne Barrel and Drum Company
Job No. 84C182

Gentlemen:

Please find attached a copy of the Chain of Custody form for the samples from the subject site. These samples were transferred to your laboratory by John A. Larkins, of Dan Raviv Associates, Inc. on December 3, 1985. The purpose of this letter is to confirm our instructions regarding the type of analysis to be performed. The analyses requested are indicated in the "Remarks" column opposite each of the samples listed on the attached form.

If you have any questions, please call.

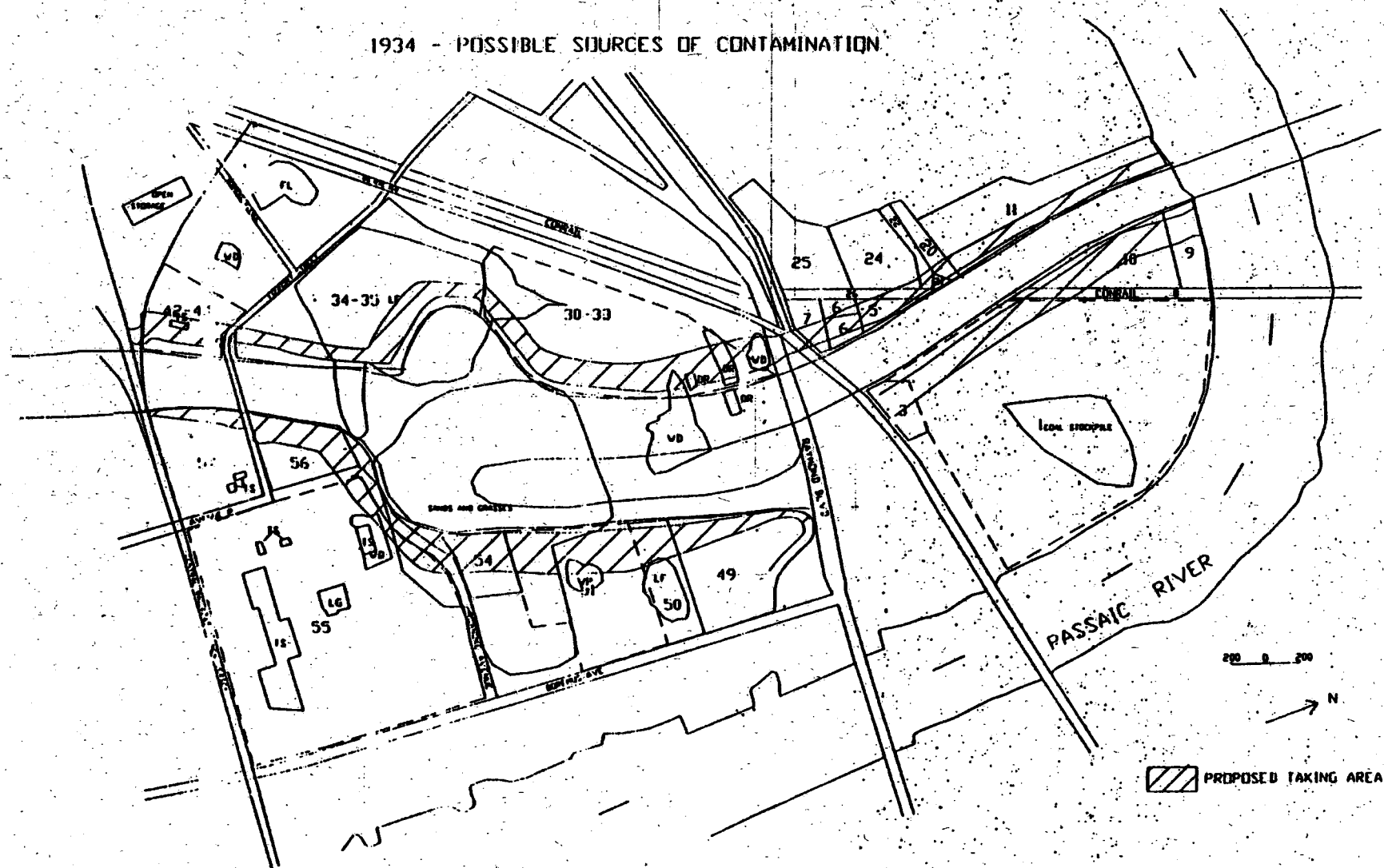
Very truly yours,

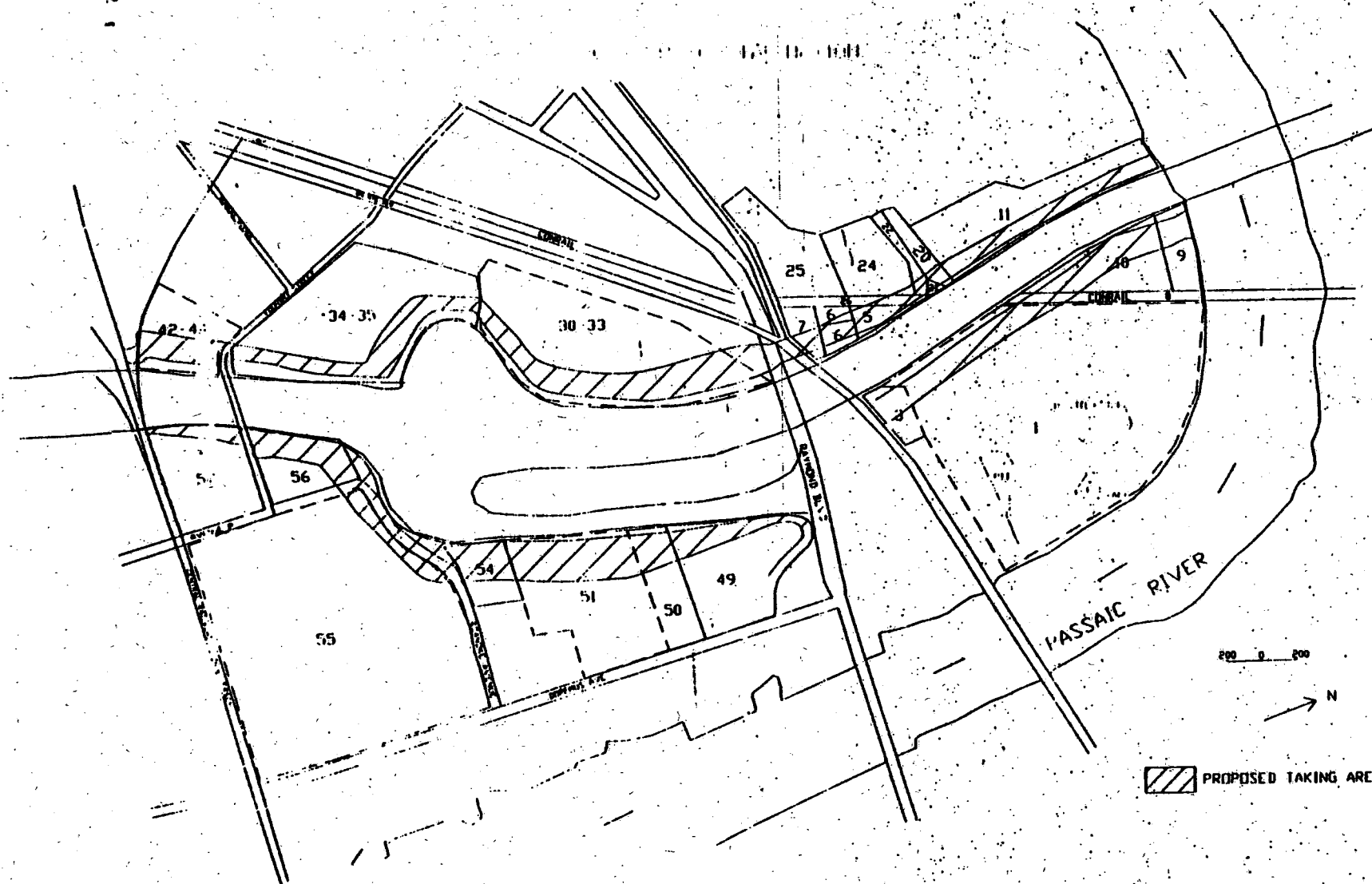
DAN RAVIV ASSOCIATES, INC.

Michael M. Zucker
Geologist

MNZ/sm
Enc.

1934 - POSSIBLE SOURCES OF CONTAMINATION





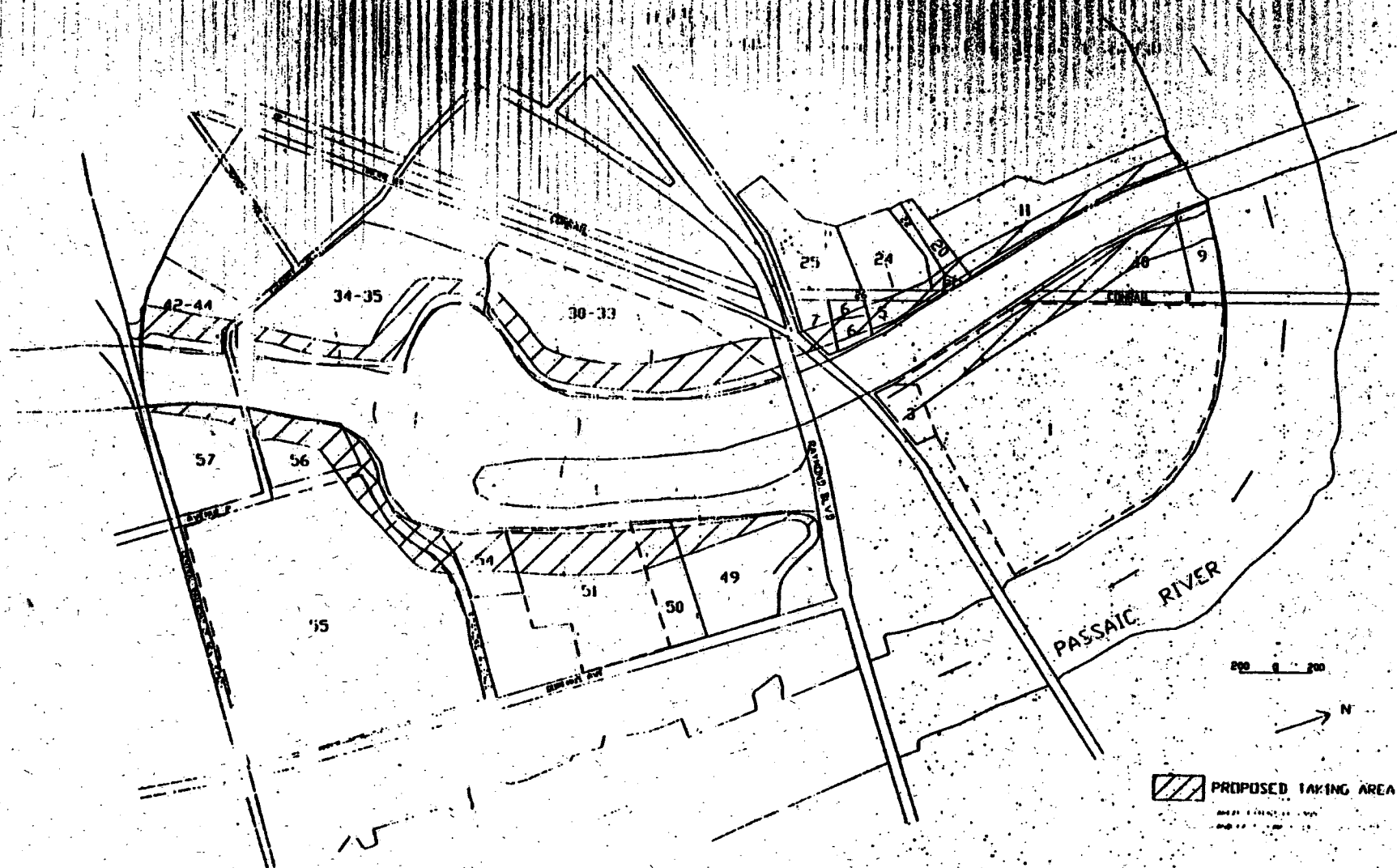
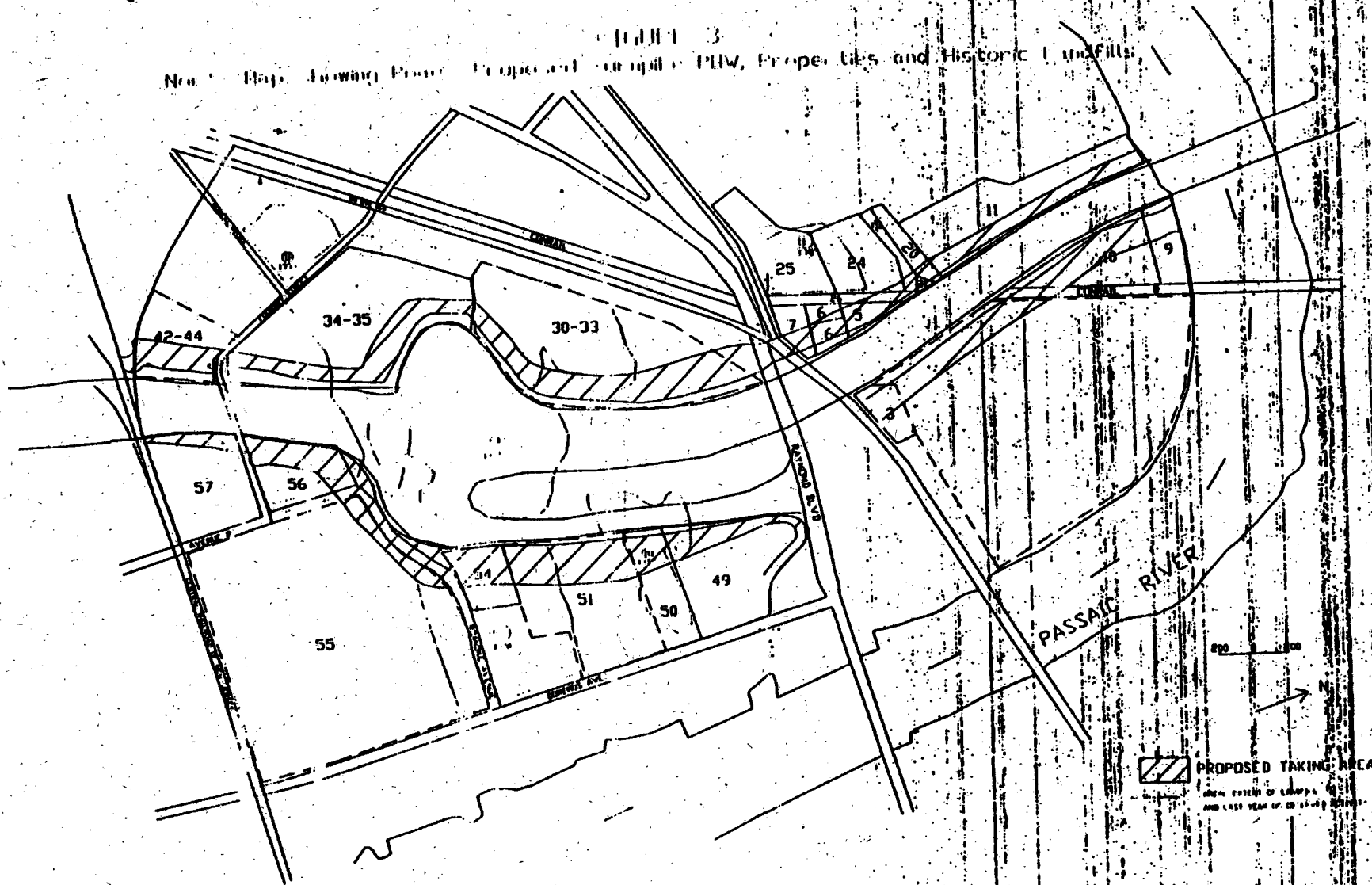
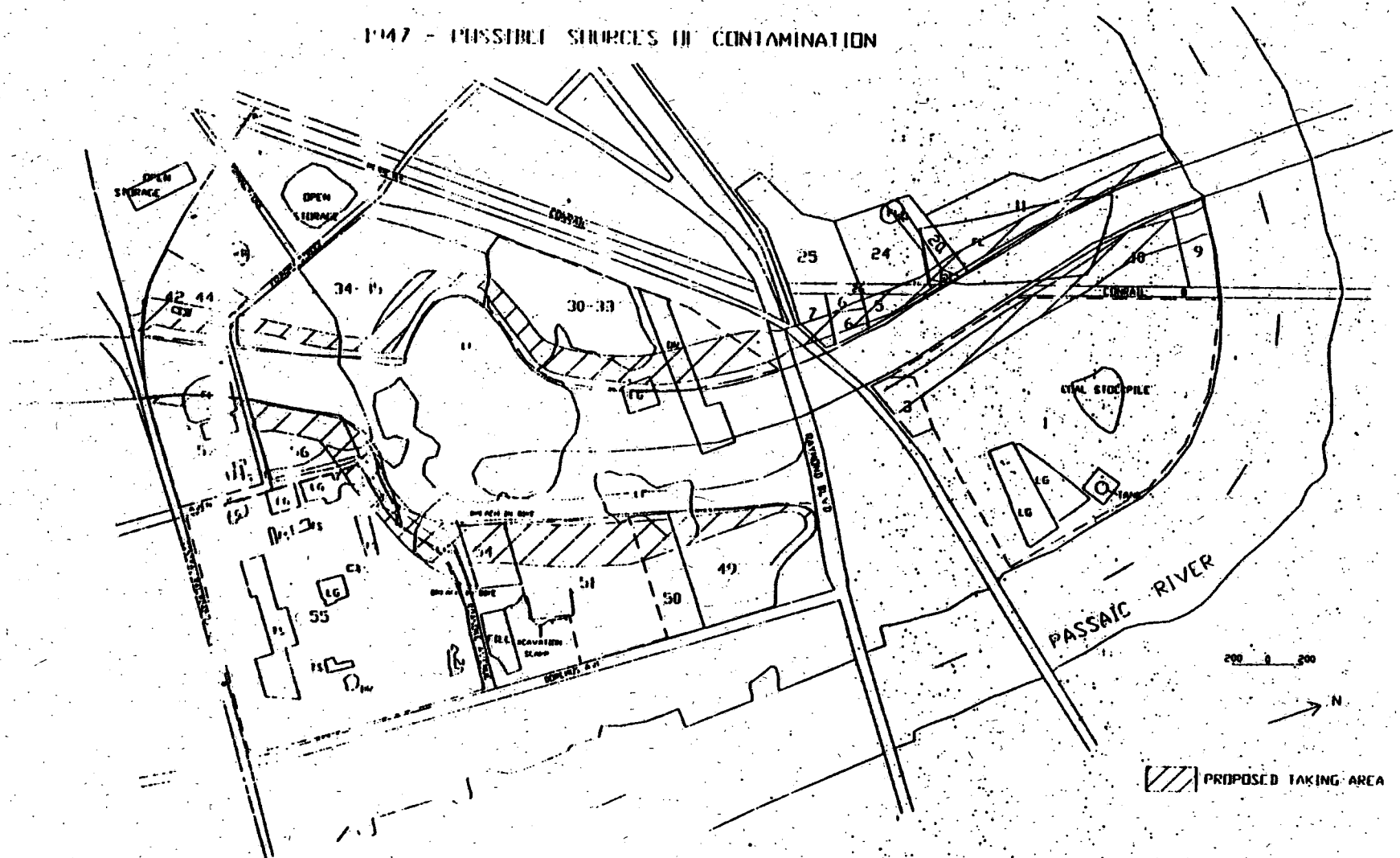



FIGURE 3
Map Showing Proposed and Existing PLW, Properties and Historic Landfills



P47 - POSSIBLE SOURCES OF CONTAMINATION



[illegible]

 PROPOSED TAKING AREA